

APPLICATION

FOR UNITED STATES LETTERS PATENT

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SPECIFICATION

TO ALL WHOM IT MAY CONCERN:

BE IT KNOWN THAT I, JAMES B. McKINLEY, a citizen of
25 UNITED STATES OF AMERICA, have invented a new and useful TOW
HOOK REPLACEMENT HITCH of which the following is a specification:

TOW HOOK REPLACEMENT HITCH

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BACKGROUND OF THE INVENTION

Field of the Invention

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The present invention relates to hitch devices and more particularly pertains to a new hitch device for allowing the use of a tow hook mounting to be utilized for a trailer hitch connection.

15 Description of the Prior Art

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The use of hitch devices is known in the prior art. U.S. Patent No. 4,746,138 includes a design adapted for preventing vibration within a hitch apparatus. Another type of hitch device is U.S. Patent No. 4,280,713 having a plate for mounting to the frame of a vehicle to supply the vehicle with a hitch connection. Yet another type of hitch device is U.S. Patent No. 5,431,425 includes a retractable trailer hitch receiving apparatus for positioning on a vehicle.

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While these devices fulfill their respective, particular objectives and requirements, the need remains for a device that allows a person to retrofit a trailer hitch to the tow hook mountings positioned on a front end of a vehicle. The tow hooks are designed for providing a position to which a cable may be attached to a vehicle which is stuck or otherwise

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incapacitated in order to move the vehicle. On such vehicles, such as four wheel drive vehicles supplied by General Motors, the tow hooks may be removed to expose usable mountings. These mountings may be used for

attaching a trailer hitch thereto so that a person may moved a trailer forward of the vehicle

5 SUMMARY OF THE INVENTION

The present invention meets the needs presented above by generally comprising a mounting plate having a top side, a bottom side, a front end, a back end and a pair of lateral sides. The plate has a threaded aperture
10 extending therethrough. The aperture extends through the top and bottom sides and is positioned generally adjacent to the back end. A threaded bolt may be extended through the aperture and into a tow hook mount. A mounting tube is attached to the top side of the plate such that the aperture is between the tube and the back end. The tube has an opening extending
15 therethrough and through a pair of open ends of the tube. An axis of the opening is orientated perpendicular to the lateral sides. A threaded bolt may be extended through the opening and into the tow hook mount. A hitch receiving housing is attached to the bottom side of the plate such that the aperture is positioned between the housing and the back end.

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There has thus been outlined, rather broadly, the more important features of the invention in order that the detailed description thereof that follows may be better understood, and in order that the present contribution to the art may be better appreciated. There are additional
25 features of the invention that will be described hereinafter and which will form the subject matter of the claims appended hereto.

The objects of the invention, along with the various features of novelty which characterize the invention, are pointed out with particularity
30 in the claims annexed to and forming a part of this disclosure.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention will be better understood and objects other than those set forth above will become apparent when consideration is given to the following detailed description thereof. Such description makes reference
5 to the annexed drawings wherein:

Figure 1 is a perspective view of a tow hook replacement hitch according to the present invention.

10 Figure 2 is a perspective view of the present invention.

Figure 3 is a cross-sectional view taken along line 3-3 of Figure 1 of the present invention.

15 **DESCRIPTION OF THE PREFERRED EMBODIMENT**

With reference now to the drawings, and in particular to Figures 1 through 3 thereof, a new hitch device embodying the principles and concepts of the present invention and generally designated by the reference
20 numeral 10 will be described.

As best illustrated in Figures 1 through 3, the tow hook replacement hitch 10 generally comprises a mounting plate 12 that has a top side 14, a bottom side 16, a front end 18, a back end 20 and a pair of lateral sides 22.
25 The plate 12 has a threaded aperture 24 extending therethrough. The aperture 24 extends through the top 14 and bottom 16 sides and is positioned generally adjacent to the back end 20. The plate 12 has a length from the back end 20 to the front end 18 generally between 5 inches and 6 inches, a width between the lateral sides 22 generally between 2
30 inches and 3 inches and a height substantially equal to 0.5 inches. A threaded bolt 6 may be extended through the aperture and into a tow hook mount 5 of a vehicle, and in particular, of a General Motors Corporation pick-up truck or sport utility vehicle.

A mounting tube 26 is attached to the top side 14 of the plate 12 such that the aperture 24 is between the tube 26 and the back end 20. The tube 26 has an opening 28 extending therethrough and through a pair of open ends 30 of the tube 26. An axis of the opening 28 is orientated perpendicular to the lateral sides 22. The tube 26 has a length between 2.5 inches and 4 inches and preferably extends beyond both of the lateral sides 22 of the plate 12. A distance between an axis of the opening 28 and line orientated perpendicular to the lateral sides and extending through an axis of the aperture 24 is between 1.50 inches and 1.75 inches and ideally equal to about 1.625 inches. The opening 28 is threaded and a threaded bolt 7 may be extended through the opening and into the tow hook mount 5.

A hitch receiving housing 32 is attached to the bottom side 16 of the plate 12 such that the aperture 24 is positioned between the housing 32 and the back end 20. The housing 32 extends forward of the plate 12. The housing 32 has a top wall 34, a bottom wall 36, a first side wall 38 and a second side wall 40 such that an open front side 42 and an open back side 44 are defined. An outwardly extending flange 46 is attached to and extends along a perimeter of the front side 42. Each of the first 38 and second 40 side walls has a bore 48 extending therethrough. The bores 48 are axially aligned with respect to each other.

A hitch member 50 is removably extendable into and attachable to the housing 32. The hitch member 50 includes a rod 52 that has a size and shape adapted for removably extending through the front side 42 and into the housing 32. The rod 52 is preferably rectangular shaped and has the same width and height as an interior of the housing 32. The rod 52 has a hole 54 extending therethrough. The hole 54 is alignable with the bores 48 such that an outer end 56 of the rod 52 extends away from the front side 42

of the housing 32. A ball hitch 58 is attached to the outer end 56 of the rod 52. A locking pin 60 is removably extendable through the bores 48 and the hole 54 for releasably securing the rod 52 to the hitch member to the housing 32. A latch pin 62 may be provided for extending through the
5 locking pin 60 to retain the locking pin 60 in place.

In use, the mounting plate 12 and mounting tube 26 are attached to the bracket 5 remaining on the front end of a vehicle when the tow hooks are removed. This allows a hitch receiving housing 32 and corresponding
10 hitch 50 to be attached to the front of the vehicle for finely tuned movements of a trailer forward of the vehicle in a manner that allows the driver of the vehicle to better view the movement of the trailer.

With respect to the above description then, it is to be realized that
15 the optimum dimensional relationships for the parts of the invention, to include variations in size, materials, shape, form, function and manner of operation, assembly and use, are deemed readily apparent and obvious to one skilled in the art, and all equivalent relationships to those illustrated in the drawings and described in the specification are intended to be
20 encompassed by the present invention.

Therefore, the foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to
25 limit the invention to the exact construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the invention.